IEEE P802.11
Wireless LANs

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|  CID237 240 NGV 60 GHz STA definition |
| Date: 2020-9-7 |
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Abstract

This submission proposes resolution of comments related to 60 GHz operation from Comment Collection on TGbd Draft 0.3.

2 CIDs: 237, 240

Revision history:

r0 initial

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Proposed Resolution** |
| 237 | 31.3.1 | 23.64 | Clause 32 should be Clause 31 | as in comment | **Revised**Agree with the commenter in principle. It was fixed as CID183. |
| 240 | 31.3.2 | 24.06 | fill TBD | as in comment | **Revised**TGbd editor to make changes in 11-20-1301r0. |

**Discussion**

**The TBD part in subclause 31.3.2 is to define what kind of MAC frames can be transmitted by a DMG STA communicating data frames outside the context of a BSS.**

1. **Unlike 11p, 60 GHz STA needs to perform beamforming training before initiating transmission of data frames. We propose to specify: “STA may send DMG Beacon frames with discovery mode field set to one.”**
2. **As STAs operating outside the context of a BSS don’t expect existence of an AP or PCP, the STAs shall not transmit MAC frames relate to scheduling. We propose to specify: “The STA may send Control frames, except those of subtype CF-End, Poll, SPR, Grant, Grant Ack, Sector Ack, Block Ack Schedule and TDD Beamforming” in subclause 31.3.2 With the same reason, we propose to specify that a DMG STA uses CBAP, not SP (Service Period, in which scheduling is performed) in OCB mode.**

**We also propose changes to text in clause 4, 9, and B to make consistent with the proposed text above.**

**Proposed changes to D0.3**

***TGbd Editor: Add the following to Draft P802.11bd D0.3 as follows:***

4.3.17 STA transmission of Data frames outside the context of a BSS

*Change the text in NOTE after the first paragraph as follows:*

NOTE—The specific frame subtypes that a STA is allowed to send when it has dot11OCBActivated true are specified in 11.18 (STAs communicating Data frames outside the context of a BSS) and 31.3.2 (DMG STAs communicating Data frames outside the context of a BSS).

***TGbd Editor: Add the following to Draft P802.11bd D0.3 as follows:***

9.4.1.46 DMG Parameters field

*Change the text in Table 9-68 as follows:*

**Table 9-68 – The BSS Type subfield when the Discovery mode field is 1**

|  |  |  |
| --- | --- | --- |
| **Subfield value** | **Responding STA role** | **Applicable BSS types** |
| 3 | AP | Infrastructure BSS |
| 2 | PCP | PBSS |
| 1 | Non-AP STA | PBSS, IBSS, OCB |
| 0 | Any | Infrastructure BSS, PBSS, IBSS, OCB |

*Change the text in fourth paragraph as follows:*The CBAP Only, CBAP Source, and ECAPC Policy Enforced subfields are valid only when transmitted　within a DMG Beacon, Probe Response, or (Re)Association Response frames and are set as follows:

* The CBAP Only subfield indicates the type of link access provided by the STA sending the DMG Beacon frame in the data transfer interval (DTI) (see 10.39.2 (Access periods within a beacon interval)) of the beacon interval. The CBAP Only subfield is set to 1 when the entirety of the DTI portion of the beacon interval is allocated as a CBAP. The CBAP Only subfield is set to 0 when the allocation of the DTI portion of the beacon interval is provided through the Extended Schedule element. The CBAP Only subfield is set to 1 when dot11OCBActivated is true.
* The CBAP Source subfield is valid only if the CBAP Only subfield is 1. The CBAP Source subfield is set to 1 to indicate that the AP or PCP has higher priority to transmit during the CBAP than non-AP and non-PCP STAs. The CBAP Source subfield is set to 0 otherwise. The CBAP Source subfield is set to 0 when dot11OCBActivated is true.
* The ECAPC Policy Enforced subfield is set to 1 to indicate that medium access policies specific to the centralized AP or PCP cluster are required as defined in 10.40.3.4 (Centralized AP or PCP cluster MAC requirements). The ECAPC Policy Enforced subfield is set to 0 to indicate that medium access policies specific to the centralized AP or PCP cluster are not required. The CBAP Source subfield is set to 0 when dot11OCBActivated is true.

31.3 Operation in 60 GHz band

31.3.2 DMG STAs communicating Data frames outside the context of a BSS

***TGbd Editor: Change the first paragraph in 31.3.2 of Draft P802.11bd D0.3 as follows:***

**When dot11OCBActivated is true in a DMG STA, the following applies in addition to description in subclause 11.1~~9~~8 (STAs communicating Data frames outside the context of a BSS):**

1. **~~TBD~~STA may send DMG Beacon frames with Discovery Mode field set to one.**
2. **The STA may send Control frames, except those of subtype CF-End, Poll, SPR, Grant, Grant Ack, Sector Ack, Block Ack Schedule and TDD Beamforming.**

## B.4 PICS proforma—IEEE Std 802.11-2016

*TGbd Editor: Change the text on rows for CFDMG and CFEDMG on the table in subclause B.4.3 of Draft P802.11bd D0.3 as follows.*

**B.4.3 IUT Configuration**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **IUT configuration** | **References** | **Status** | **Support** |
| .. | .. | .. | .. | .. |
| \*CFDMG | Directional multi-gigabit (DMG) PHY | 9.4.2.127 (DMG Capabilities element) | O.2CFDMG: MCFEDMG: MCFTDD: MCFNGV60: M | Yes  No  |
| ... |  |  |  |  |
| \*CFEDMG | Enhanced directional multi-gigabit (EDMG) PHY | 9.4.2.263 (EDMG Capabilities element) | CFEDMG: MCFNGV60: O | Yes  No  |
| ... |  |  |  |  |
| \*CFOCB | Operation outside the context of a BSS(OCB) | 11.1~~9~~8 (STAs communicating Data frames outside the context of a BSS) | O.1CF5G9:MCFNGV:M(CID99)CFNGV60: M | Yes  No  |
| ... |  |  |  |  |
| CFNGV60 | Next Generation V2X (NGV) Operation in 60GHz band | 31.3 (Operation in 60 GHz band) | O | Yes  No  N/A  |
| ... |  |  |  |  |

**Straw Poll:**

* **Do you agree to accept the comment resolution for CIDs 237, 240 in 20/1301r0?**

**References**

[1] Draft P802.11ay D5.0

[2] Draft P802.11REVmd D4.0

[3] 11-20/1162r2 OCB for 60GHz

[4] 11-20/0731r2 Comment Resolution D0.3 CID0099